



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,821	11/29/2001	Serge Goiffon	034299-371	9744

7590 05/23/2006

Thelen Reid & Priest LLP
P.O Box 640640
San Jose, CA 95164-0640

EXAMINER

TO, JENNIFER N

ART UNIT	PAPER NUMBER
----------	--------------

2195

DATE MAILED: 05/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/995,821	Applicant(s) GOIFFON, SERGE	
	Examiner Jennifer N. To	Art Unit 2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 March 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 14-29 are pending for examination.
2. Claim 28 are objected to because it is a duplicated of claim 27.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shi et al. (hereafter Shi) (U.S. Patent No. 6757897), and in view of Baker-Harvey (U.S. Patent No. 6385638).

5. Shi and Baker-Harvey were cited in the previous office action.

6. As per claim 14, Shi teaches the invention substantially as claimed including a method for providing a real time operating process for multiple tasks (abstract, lines 1-5), the method comprising:

allotting a time quota in a first observation window to a first task having a high priority designation (fig. 4; abstract, lines 10-32; col. 12, lines 43-67; col. 13, lines 1-18);

Art Unit: 2195

allotting a remaining time quota in said first observation window to a second task having a priority designation lower than said first task where as at least a portion of said second task is guaranteed to be processed during said remaining time quota (fig. 4; abstract, lines 10-32; col. 12, lines 43-67; col. 13, lines 1-18);

calculating an amount of time said first task is processed in said first observation window (abstract, lines 10-15; col. 14, lines 34-53; col. 21, lines 44-67); and

sanctioning said first task to a subsequent observation window when said calculated amount of time exceeds said time quota in said first observation window (col. 13, lines 20-67; col. 14, lines 1-12).

Shi did not specifically teach a plurality of time sensitive observation windows wherein said tasks are processed when in said observation windows.

7. Baker-Harvey teaches a plurality of time sensitive observation windows wherein said tasks are processed when in said observation windows (fig. 2; col. 3, lines 30-46; col. 4, lines 35-36).

8. It would have been obvious to one of the ordinary skill in the art at the time the invention was made to have combined the teaching of Shi and Baker-Harvey because Baker-Harvey teaching of a plurality of time sensitive observation windows wherein said tasks are processed when in said observation windows

Art Unit: 2195

would improve the integrity of Shi's system by providing information to the processor resource distributor to determining a schedule for allocating processor time to each of the applications/tasks (Baker-Harvey, col. 3, lines 44-46).

9. Claims 15-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shi et al. (hereafter Shi) (U.S. Patent No. 6757897), in view of Baker-Harvey (U.S. Patent No. 6385638), and further in view of Delseny et al. (hereafter Delseny) (U.S. Patent No. 6275767).

10. Delseny was cited in the previous office action.

11. As per claim 15, Shi teaches the invention as claim including a real time multi-task operating method (abstract, lines 1-5), the method comprising:

allocating a maximum execution duration time for each task in a plurality of tasks during each observation window (fig. 4; abstract, lines 10-32; col. 12, lines 43-67; col. 13, lines 1-18);

allocating at least a minimum execution time for at least one lower priority task (fig. 4; abstract, lines 10-32; col. 12, lines 43-67; col. 13, lines 1-18);

calculating time used by each task during each observation window (abstract, lines 10-15; col. 14, lines 34-53; col. 21, lines 44-67); and

sanctioning a task which exceeds the allocated maximum execution duration time in an observation window, wherein the sanctioned task returns to a

Art Unit: 2195

central resource unit during a subsequent observation window (col. 13, lines 20-67; col. 14, lines 1-12).

Shi did not specifically teach the step of defining a set of fixed duration observation windows, wherein the duration of the windows are initially adjustable; and an avionic computer.

12. However, Baker-Harvey teaches the step of defining a set of fixed duration observation windows, wherein the duration of the windows are initially adjustable (fig. 2; col. 3, lines 30-46; col. 4, lines 35-36).

13. It would have been obvious to one of the ordinary skill in the art at the time the invention was made to have combined the teaching of Shi and Baker-Harvey because Baker-Harvey teaching of a set of fixed adjustable duration observation windows would improve the integrity of Shi's system by providing information to the processor resource distributor to determining a schedule for allocating processor time to each of the applications/tasks (Baker-Harvey, col. 3, lines 44-46).

14. Delseny teaches an avionic computer (abstract; col. 1, lines 6-7).

15. It would have been obvious to one of an ordinary skill in the art at the time the invention was made to have combined the teaching of Shi, Baker-Harvey,

Art Unit: 2195

and Delseny because Delseny 's an avionic computer would expand the usage of Shi and Barker-Harvey's system by managing links between certain aircraft equipment and the ground/board communication means (abstract, lines 1-4).

16. As per claim 16, Shi teaches that supplying a value from a global software counter, wherein the value is adjusted by adding time passed since a last clock pulse from a material counter (col. 14, lines 34-53; col. 18, lines 4-67).

17. As per claim 17, Shi teaches reallocating the task having a first reallocating point existing in a scheduling code, a second reallocating point existing in a clock pulse process interruption program, said program with a higher priority than all system tasks enabling the calculation of the time spend by the task in progress and to sanction it if its quota exceeded (col. 22, lines 13-67; col. 23, lines 1-67; col. 24, lines 1-10).

18. As per claim 18, Shi teaches that wherein the sanctioning the task occurs during a task change (col. 13, lines 52-65).

19. As per claim 19, Shi teaches that wherein sanctioning the task occurs during duration of a clock pulse (col. 14, lines 34-53).

20. As per claim 20, Shi teaches wherein sanctioning the task includes either reducing a priority of the task, stopping the task or eliminating the task (col. 13, lines 52-65; col. 14, lines 34-53).

Art Unit: 2195

21. As per claim 21, Baker-Harvey teaches initializing the operating process, the initializing including starting reallocation procedures, launching the task, and configuring a duration of each observation window (col. 5, lines 58-62; col. 7, lines 44-45, lines 60-62).

22. As per claim 22, Shi teaches creating a task including configuring a maximum use duration of the central resource unit during the observation window, configuring the sanction to be eventually applied to the task, and launching surveillance of the task (col. 17, lines 16-67; col. 18, lines 1-24).

23. As per claim 23, Shi teaches that wherein surveillance of the task is inhibited when task is terminated (col. 17, lines 16-67).

24. As per claim 24, Shi teaches:

calculating time spend by the task during the observation window
(abstract, lines 10-15; col. 14, lines 34-53; col. 21, lines 44-67);

applying a sanction is applied if the time spend by the task is longer than the maximum allocated time in the observation window (col. 13, lines 20-67; col. 14, lines 1-12).

Baker-Harvey teaches during switching of this first task to another task: event is dated (table 3), starting time of said another task is recorded (table 3).

Art Unit: 2195

25. As per claim 25, Baker-Harvey teaches setting time spent by the task at a beginning of the observation window to a value of zero (table 2); and rehabilitating the task which has been sanctioned col. 8, lines 57-61).

26. As per claims 27-28, Delseny teaches that wherein the avionic computer system comprises an Air Traffic Service Unit calculator (abstract, lines 1-12; col. 4, lines 22-59).

27. As per claim 29, it is rejected for the same reason as claims 14-15, and 22 above.

Response to Arguments

28. Applicant's arguments filed 03/30/2006 have been fully considered but they are not persuasive.

29. In the remarks applicant argued:

- i. Shi fails to teach that a maximum execution duration or quota is allocated to each task.
- ii. Shi fails to teach that the task is sanction to another observation window if execution of the task exceeds the time allotted to it.

30. Examiner respectfully traverses Applicant's remarks:

Art Unit: 2195

- A. As to point (i), Shi teaches that a maximum execution duration or quota is allocated to each task (fig. 4; abstract, lines 10-32; col. 12, lines 43-67; col. 13, lines 1-18; col. 17, lines 15-59).
- B. As to point (ii), Shi teaches that the task is sanction to another observation window if execution of the task exceeds the time allotted to it (col. 13, lines 20-67; col. 14, lines 1-12).

Conclusion

31. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

32. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer N. To whose telephone number is

Art Unit: 2195

(571) 272-7212. The examiner can normally be reached on M-T 6AM- 3:30 PM,
F 6AM- 2:30 PM.

33. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

34. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer N. To
Examiner
Art Unit 2195

~~MENG-AI AN~~
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100